

Subject: INFO-HAMS Digest V89 #925  
To: INFO-HAMS@WSMR-SIMTEL20.ARMY.MIL

INFO-HAMS Digest                      Thu, 23 Nov 89                      Volume 89 : Issue 925

Today's Topics:

ARRL (Was Re: No more amateur radio fees?)  
From junk to a jewel - how I monitor while away from home  
Mobile VHF (almost) Kilowatt  
Planes and HT's.

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Date: 23 Nov 89 15:49:58 GMT  
From: cs.utexas.edu!uwm.edu!ux1.cso.uiuc.edu!tank!eeca!cps3xx!  
usenet@tut.cis.ohio-state.edu (Usenet file owner)  
Subject: ARRL (Was Re: No more amateur radio fees?)

I wish the

ARRL would  
use the  
whole line  
for their  
posts,  
instead of  
just using  
the right  
hand side  
of the  
screen.  
But who am  
I to  
question a  
bunch of  
bureaucrats  
who send  
form  
letters to  
their  
constituents  
that don't  
address the  
issues  
which said  
constituents  
raise.  
73.

In the rare case that original ideas    Kenneth J. Hendrickson    N8DGN

are found here, I am responsible. Owen W328, E. Lansing, MI 48825  
Internet: hendrick@frith.egr.msu.edu UUCP: ...!uunet!frith!hendrick

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Date: 23 Nov 89 14:46:19 GMT  
From: att!cbnewsc!parnass@ucbvax.Berkeley.EDU (Bob Parnass, AJ9S)  
Subject: From junk to a jewel - how I monitor while away from home

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FROM JUNK TO A JEWEL  
or How I Listen to My Home Radio Receiver  
While Away From Home

by Bob Parnass, AJ9S

One Saturday morning a few years ago, my wife Pam, N9HRZ, brought home 3 large gray steel relay boxes from a garage sale. She didn't know what they were, but was sure they were a "steal" at \$5 apiece.

My examination brought disappointment. These 35 lb. "boat anchors" appeared to be something ripped out of a factory control system. The outsides were filthy, and someone had spilled oil inside of them.

Pam sensed my unhappiness with her find, so she offered to ask her dad, KA9CAI, to sell these boat anchors at a hamfest so we could get back some of the \$15.

For a year, one box sat in my garage, and the other boxes two sat in my father-in-law's garage.

Junk Reexamined

Each box had a large hinged door, protected against the weather by a gasket. On the inside was a thick steel panel with about 8 DPDT relays, a time delay relay, and several toggle switches.

All relays were made by Potter & Brumfield, a top relay manufacturer. Each had a 117 VAC coil, 10 amp contacts, and was in a high quality Amphenol socket. The DPDT relays were enclosed in clear plastic dust covers, and had neon bulbs and resistors wired across their coils, which provided a visual indication of relay activation.

Components were wired together neatly to 2 large Bakelite barrier (terminal) strips. All interconnecting wires had terminals crimped on at the ends, so a screwdriver was the only tool necessary to service the unit.

Now for the challenge:

- I wanted a way to listen to my home radio receivers while I was away from home. Could this "junk" be converted into a remote receiver controller?

I dreamed up a remote receiver scheme when back when I was presiding over our club at Bell Labs which operated on a poverty level budget. When the club telephone line rings, our controller:

1. Grabs the phone line by placing a resistor across it
2. Starts a timer
3. Connects the audio output of the remote 2 meter receiver to the phone line through an old phone patch

After the timer times out, the controller drops the phone line.

We had originally thought of modifying a telephone answering machine to serve as a controller, but our home-built controller proved cheaper and more reliable.

### Time Delay Relay

The plug in time delay relay was a DPDT configuration, enclosed in a yellow cover. Instructions printed on the side revealed that the delay time was between 0.1 and 10 seconds, and was determined by the value of an external resistor.

Older delay relays use a thermal switch, which heats up over time, making or breaking contact after reaching a given temperature. Fortunately, my delay relay employed more modern circuitry. Inside was a printed circuit board with an actual solid state timer. The current Newark catalog lists this relay at \$45, socket extra.

I wanted a delay adjustable between a few seconds and an 60 minutes. Not having a schematic of the timer, I applied 117 VAC to the coil and probed the circuit with a

voltmeter. I found the capacitor that, along with the external resistor, determined the delay time.

A much larger capacitor was needed for long delays, but wouldn't fit within the relay case. I removed the original timing capacitor, and ran 2 wires from its old location to an external 220 ufd capacitor through a hole drilled in the case.

### A Controller Takes Shape

I rewired the relays, and mounted a rheostat to set the timeout delay. The addition of pilot lights, 1/4" phone jacks, and modular telephone jacks complete the construction.

The remote receiver controller at IHARC requires use of an external phone patch to connect the telephone line to the receiver audio. We currently use a deluxe patch made by Waters.

Not wanting to tie up a phone patch for my home controller, I brewed up an interface to feed the audio output of a receiver to the phone line. It used a capacitor and 600 ohm transformer salvaged from a discarded PC board, and a varistor cut out from a telephone handset. The varistor clips residual voltage spikes that could appear on the telephone line from ringing voltage and damage the receiver.

The 35 lb. receiver controller works well. The only problem to date is that the timer was unstable. Sometimes it timed out after 10 minutes, sometimes after 20 minutes, sometimes .... I replaced the timing capacitor with a better grade component.

I use the setup to listen to a home scanner while I'm away from home. The scanner is powered from an AC outlet which becomes live when the controller answers a phone call.

The controller also came in handy for monitoring the NASA frequencies on shortwave during Shuttle missions. I connected the controller to my Japan Radio NRD-525 HF receiver and called it up from my office at work.

During Hurricane Hugo, I set up the controller to monitor

the Hurricane Net on 20 meters and gave out my phone number to coworkers with relatives living in the affected area. They could call my home and listen to 15 minutes of hurricane news more current than reports available from the press.

The "Junk to a Jewel" controller is connected to spare phone line. I wouldn't connect it to my main telephone line without adding a circuit that waits for several rings before grabbing the line.

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Bob Parnass, AJ9S - AT&T Bell Laboratories - att!ihuxz!parnass (708)979-5414

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Date: Thu, 23 Nov 89 12:29:38 GMT  
From: pat@kd9uu.ampr.org (Pat Davis kd9uu)  
Subject: Mobile VHF (almost) Kilowatt

FYI.. I'm sure you've seen the adds for:

CCI, Communication Concepts, INC.  
508 Millstone Dr.  
Xenia, OH 45385

PH# (513) 426-8600 MC/Visa

They have parts/kits for a 300W VHF amp.. Not sure if it runs on 12V or 24/28 volts. Hey what's a few Db among friends??  
I can't tell you if it's class C or quasi-linear.  
I have nothing to gain by revealing this "secret".. I DO NOT know the people.. I have never built one. I know, it's just not the same.  
You want REAL POWER so you can stall all those new-fangled computer brain-box controlled vehicles you are around, possibly your OWN :-)->--< .

KD9UU, pat.davis@mail.admin.wisc.edu 128.104.198.10

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Date: Thu, 23 Nov 89 14:27:47 GMT  
From: Pete Lucas 0793-411613 <PJML%IBMA.NERC-WALLINGFORD.AC.UK@CUNYVM.CUNY.EDU>  
Subject: Planes and HT's.

A metal-bodied airframe will act as a faraday shield, hence any RF radiated outside the airframe will tend not to make it to the inside except by passing

through any non-metallic holes (windows, cockpit glazing). The internal avionics are therefore screened from much of the RF fields found outside the airframe. However, any RF generated INSIDE the plane is confined, and cannot radiate freely into space, so it hangs around trying to upset things!

Bear in mind that typical HF SSB airplane radios are able to put out several hundred watts. I don't know how efficient the antennas on a plane are, or how well they are matched, but I guess a fair amount of the RF actually gets radiated. However, hoping that the avionics are RF-proof, and using a HT/cellular phone is IMHO a risk. Electromagnetic compatibility and RFI-proofing doesn't come cheap, and we all live in a world where cost-cutting is a fact of life. RFI-filters are often the first to be omitted when building to a budget...!

11111000

de G6WBJ

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